

REMARKS

Several claims have been amended to overcome the claim objections and claim rejections under 35 USC § 112, second paragraph.

CLAIM OBJECTIONS

Claims 60, 69 and 70 have been amended to overcome the claim objections, by replacing the recitation "selected from the group formed by" (claim 60 in the definitions for Ar and X; claim 69 in the definitions for Ar and X; claim 70 in line 3).

CLAIM REJECTIONS UNDER 35 USC § 112, SECOND PARAGRAPH

Claim 60 has also been amended to overcome the claim rejections under 35 USC § 112, second paragraph by replacing the passage "Q is a group comprising oxygen, nitrogen or sulphur, or..." by "Q is a group which is reactive towards a hydrogen carried by a heteroatom selected from the group consisting of oxygen, nitrogen and sulphur, or...". Applicants submit that this wording corresponds to that of the former claim 60, before being amended, wherein the proper Markush language is recited.

Therefore, Applicants submit that there is no problem of valence anymore concerning the group Q, and this rejection should be withdrawn

With respect to the rejections relative to the structures represented in claims 61, 65 and 69, the Examiner alleges that, if they correspond to radicals, it is not clear what these radicals are attached to.

Applicants respectfully submit that these structures are not those of radicals, but of cross-linked polymers.

Consequently, in order to overcome these rejections, Applicants submit the following amendments:

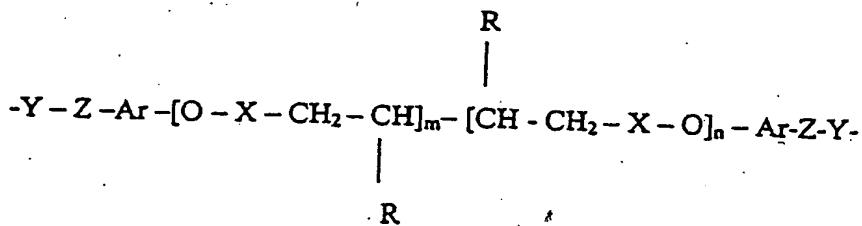
- the structure of claim 61 has been amended by deleting the line on the right side of the structure,
- the same applies for the structures represented on claim 65.

However, Applicants submit that it is not necessary to amend the structure of claim 69.

With respect to claims 64 and 65, the Examiner alleges that it is not clear which structure is referred to as formula III.

Applicants respectfully disagree. Indeed, since claim 64 concerns a cross-linked compound made by reacting the chiral unit according to claim 60 with:

- a compound of formula I:  $[R-CH=CH-(X)-O]_n-Ar-Q$ , and
  - a compound of formula II:  $Ar'-Z'$ ,
- to make a polymerizable precursor of formula III, it is clear for the person skilled in the art, that the precursor of formula III is the compound having the formula set on page 5 of the listing of claims filed on September 2, 2003, i.e.:



As concerns claim 69, the Examiner alleges that the second and third structures have dotted lines and some attachments are not shown properly with bonds.

Applicants point out that the above mentioned rejections concern the third and fourth structures, and not the second and third ones.

Applicants submit that one of skill in the art would readily understand that the allegedly missing bonds and the allegedly dotted lines are the result of poor quality photocopies.

Nevertheless, in order to overcome this objection, the third and fourth structures have been amended by inserting unbroken lines for representing the allegedly missing bonds, and by replacing the allegedly dotted lines by unbroken lines for representing the corresponding bonds. If the Examiner desires to have these structures represented with strikeouts and underlining, please advise.

As concerns the definition of X, the Examiner alleges that claim 69 defines X as alkoxy, hydroxyl and trihalogenoalkyl groups. Thus, the action considers that there is a valence problem if X is an alkoxy group, a hydroxyl group or a trihalogenoalkyl group.

Applicants submit that the Examiner is wrong when considering X as being an alkoxy, a hydroxyl or a trihalogenoalkyl group, since claim 69 recites X as a linear alkylene group, carrying more than one carbon atom, a branched alkylene group, or an arylene group, optionally substituted with at least one group selected from the group consisting of alkyl, alkoxy, hydroxyl and trihalogenoalkyl groups. Thus, Applicants allege that there is no valence problem for X and this rejection relative to X should be withdrawn.

The Examiner also raises a similar valence problem for Y being the amino group. Applicants allege that one of skill in the art would understand that the amino group means -NH- because of the way of attachment of Y in the structures, i.e. in the main chain. Thus, Applicants submit that this rejection should be withdrawn.

Furthermore, Applicants submit that the claim ends as recited and no additional text is missing.

As regards claim 70, Applicants have amended the claim in order to overcome the rejection relative to the passage

"...and comprising -SH, -SiH or -CH=CH-". In particular, claim 70 has been amended by replacing "...at least one group of alkoxy, a halogeno or an aminosilane groups and comprising -SH, SiH or -CH=CH." by "...at least one group selected from the group consisting of alkoxy, halogeno and aminosilane group, said group also comprising a function selected from the group consisting of -SH, SiH and -CH=CH<sub>2</sub>".

Thus, Applicants submit that one of skill in the art would readily understand what the cited groups comprise.

Claim 71 has the term "cross-linked" before "...compound according to claim 61...." Thus, claim 71 is in conformity with claims 60 and (amended) claim 61.

Applicants also submit that claim 61 has been amended in order to put claim 61 in conformity with claim 60, by inserting the term "chiral" between "...cross-linked...."

With respect to claim 75, the Examiner raises an rejection relative to the clarity of the passage "...COCl or its precursor; -COOH".

Applicants submit that it is clear for one of skill in the art that the term "precursor" appearing after -COCl may refer to a formula other than -COOH. Furthermore, since the terms "precursor" and "-COOH" are separated by a semicolon, one of skill in the art would readily understand that the group Q may be COCl or its precursor, which is not necessarily -COOH.

As regards the rejection relative to -N=C=O, Applicants submit that one of skill in the art would readily understand that it necessarily refers to the group -N(C=O) because of the way of attachment of Q in the main chain. The formulae (-N=C=O) indicated in claim 75 is an obvious mistake and is replaced by -N(C=O).

Applicants submit that the same applies for -N=C=S, which is also replaced by -N(C=S).

Thus, Applicants respectfully submit that these rejections should be withdrawn.

With regards to claim 76, Applicants submit the following amendment:

Claim 76 has been amended by replacing the terms "of holoside, a heteroholoside, an oligoside, a cyclooligoside, a heterooligoside, a polyoloside, a heteropolyoside, an enzyme or a protein" by

"of a product selected from the group consisting of holosides, heteroholosides, oligosides, cyclooligosides, heterooligosides, polyosides, heteropolyosides, enzymes and proteins".

#### CLAIMS REJECTIONS UNDER 35 USC § 102

The examiner considers that claims 21, 60, 61, 65, 70-72 are rejected under 35 USC § 102(e) as being anticipated by Still et al. (US 5,571,911), since it discloses a chiral cross-linked compound that could be bound to a solid support.

Applicants submit that the cross-linked chiral compound of claim 60 is different from that of the chiral receptor molecule of Still et al.

Indeed, the cross-linked chiral compound of claim 60 is made by:

a) reacting:

- at least one chiral unit (actually one functional group of at least one chiral unit) with
- a compound having at least one double bond between two carbon atoms located in the main chain

to create a polymerizable precursor comprising said chiral unit and also said double bond between two carbon atoms,

b) polymerizing the precursor to create a cross-linked chiral compound.

The differences between the cross-linked compound of claim 60 and the chiral receptor molecule of Still et al. mainly lie in the nature of one of the reactants used in the first step (step a) of the preparation of the cross-linked chiral compounds, in particular the compound which is made reacting with the chiral unit.

In the process of preparation disclosed in "Still et al.", the chiral reactant is made reacting with a compound having the structure described on column 3 lines 22 to 40 of "Still et al.", which does not comprise any double bond between two carbon atoms. Thus, the reaction of the chiral reactant with this compound would necessarily lead to a compound which is different from the polymerizable precursor of claim 60. Thus, the same applies to the polymerization of this compound.

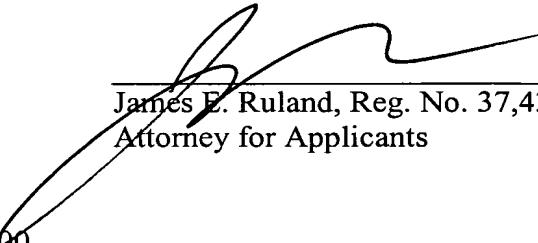
Since the cross-linked chiral compound of claim 60 is different from the chiral receptor molecule of Still et al., the same applies to the supported cross-linked chiral compound obtainable from cross-linked chiral molecule according to claim 60.

Consequently, Applicants allege the rejection of claims 21, 60-61, 65, 70-72 under 35 USC should be withdrawn.

In view of the above, favorable reconsideration is courteously requested. If there are any remaining issues which can be expedited by a telephone conference, the examiner is courteously invited to telephone counsel at the number indicated below.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,



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